

I CLAIM:

1 1. A method for treating gastritis and peptic ulcer disease comprising:

2 (a) administration of an oral liquid dosage form comprising:

3 (i) a first material selected from the group consisting of a bile

4 acid, an aqueous soluble derivative of a bile acid, a bile acid salt, a bile acid conjugated

5 with an amine by an amide linkage, and combinations thereof ;

6 (ii) a second material selected from the group consisting of an

7 aqueous soluble starch conversion product and an aqueous soluble non-starch

8 polysaccharide; and

9 (iii) water,

10 wherein the first and second materials both remain in solution for all pH values of the

11 solution within a selected range of pH values.

1 2. The method of Claim 1 wherein the dosage form is selected from

2 the group consisting of a syrup, a thick syrup, and a paste.

1 3. The method of Claim 1 wherein the oral liquid dosage form

2 additionally comprises a bismuth compound in a pharmaceutically effective amount.

1 4. The method of Claim 3 wherein the bismuth compound comprises

2 an aqueous soluble reaction product between a bismuth ion and a chelator.

1 5. The method of Claim 4 wherein the chelator is selected from the
2 group consisting of citric acid, tartaric acid, malic acid, lactic acid and eidetic acid and
3 alkalies.

1 6. The method of Claim 5 wherein the bismuth compound is selected
2 from the group consisting of an ammonium salt of bismuth sulphate, an ammonium salt
3 of bismuth citrate, and bismuth sodium tartrate.

1 7. The method of Claim 1 wherein the first material is selected from
2 the group consisting of ursodeoxycholic acid, chenodeoxycholic acid, cholic acid,
3 hyodeoxycholic acid, deoxycholic acid, 7-oxolithocholic acid, lithocholic acid,
4 iododeoxycholic acid, iocholic acid, tauroursodeoxycholic acid, taurochenodeoxycholic
5 acid, taurodeoxycholic acid, glyoursodeoxycholic acid, taurocholic acid, glycocholic
6 acid, their derivatives at a hydroxyl or carboxylic acid group on the steroid nucleus, their
7 salts, or their conjugates with amines.

1 8. The method of Claim 1 wherein the second material is selected
2 from the group consisting of maltodextrin, dextrin, corn syrup corn syrup solid, soluble
3 starch, and dextrans.

1 9. The method of Claim 1 wherein the the oral liquid dosage form
2 comprises one or more additional bile acids, aqueous soluble derivatives of bile acid, bile
3 acid salts, and amine-conjugated bile acids conjugated by an amide linkage.

1 10. The method of Claim 1 wherein the the oral liquid dosage form
2 additionally comprises a least one emulsifying agent.

1 11. The method of Claim 10 wherein the emulsifying agent is selected
2 from the group consisting of guar gum, pectin, acacia, carrageenan, carboxymethyl
3 cellulose sodium, hydroxymethyl cellulose, hydroxypropyl cellulose, methyl cellulose,
4 polyvinyl alcohol, povidone, tragacanth gum, xanthan gum, and sorbitan ester.

1 12. The method of Claim 1 wherein the oral liquid dosage form
2 additionally comprises at least one pharmaceutical in a pharmaceutically effective
3 amount.

1 13. The method of Claim 12 wherein the pharmaceutical is selected
2 from the group consisting of antibiotics, H₂-receptor antagonists, and antiprotozoal drugs.

1 14. The method of Claim 12 wherein the pharmaceutical is selected
2 from the group consisting of ampicillin, amoxicillin, cefaclor, cefadroxyl, azithromycin,
3 clarithromycin, demeclocycline·HCl, doxycycline, minocycline·HCl, tetracycline,
4 oxytetracycline, cimetidine, famotidine, nizatidine, ranitidine, sucralfate, metronidazole,
5 atovaquone, and pentamidine·isethionate.

1 15. A method for treating a liver disease comprising:

2 (a) administration of an oral liquid dosage form comprising:

3 (i) a first material selected from the group consisting of a bile
4 acid, an aqueous soluble derivative of a bile acid, a bile acid salt, a bile acid conjugated
5 with an amine by an amide linkage, and combinations thereof ;

6 (ii) a second material selected from the group consisting of an
7 aqueous soluble starch conversion product and an aqueous soluble non-starch
8 polysaccharide; and

9 (iii) water,

10 wherein the first and second materials both remain in solution for all pH values of the
11 solution within a selected range of pH values.

1 16. The method of Claim 15 wherein the dosage form is selected from
2 the group consisting of a syrup, a thick syrup, and a paste.

1 17. The method of Claim 15 wherein the first material is selected from
2 the group consisting of ursodeoxycholic acid, chenodeoxycholic acid, cholic acid,
3 hyodeoxycholic acid, deoxycholic acid, 7-oxolithocholic acid, lithocholic acid,
4 iododeoxycholic acid, iocholic acid, tauroursodeoxycholic acid, taurochenodeoxycholic
5 acid, taurodeoxycholic acid, glyoursodeoxycholic acid, taurocholic acid, glycocholic
6 acid, their derivatives at a hydroxyl or carboxylic acid group on the steroid nucleus, their
7 salts, or their conjugates with amines.

1 18. The method of Claim 15 wherein the second material is selected
2 from the group consisting of maltodextrin, dextrin, corn syrup corn syrup solid, soluble
3 starch, and dextrans.

1 19. The method of Claim 15 wherein the oral liquid dosage form
2 additionally comprises at least one pharmaceutical in a pharmaceutically effective
3 amount.

1 20. The method of Claim 19 wherein the pharmaceutical is selected
2 from the group consisting of acyclovir, amantadine·HCl, rimantidine·HCl, cidofovir,
3 delavirdine mesylate, didanosine, famciclovir, forscarnet, sodium gancyclovir,
4 idoxuridine, lamivudine, nevirapine, penciclovir, ribavirin, stavudine, trifluridine,
5 valacyclovir·HCl, zalcitabine, zidovudine, indinavir·H₂SO₄, ritonavir,
6 nelfinavir·CH₃SO₃H, saquinavir·CH₃SO₃H, interferons, branched chain amino acid,
7 betamethasone, budesonide, dexamethasone, fludrocortisone·CH₃COOH, flunisolide,
8 prednisone, prednisolone, methyl prednisolone, hydrocortisone, trameinolone,
9 chlorambucil, azathioprine, azacitidine, fluorouracil, mercaptopurine, methotrexate,
10 trientine·2HCl, and catechin.

1 21. The method of Claim 15 wherein the oral liquid dosage form
2 additionally comprises a a branched chain amino acid.

1 22. The method of Claim 21 wherein the branched chain amino acid is
2 selected from the group consisting of leucine, isoleucine, and valine.

1 23. A method for treating gall stones comprising:

2 (a) administration of an oral liquid dosage form comprising:

3 (i) a first material selected from the group consisting of a bile
4 acid, an aqueous soluble derivative of a bile acid, a bile acid salt, a bile acid conjugated
5 with an amine by an amide linkage, and combinations thereof ;

6 (b) a second material selected from the group consisting of an
7 aqueous soluble starch conversion product and an aqueous soluble non-starch
8 polysaccharide; and

9 (c) water,

10 wherein the first and second materials both remain in solution for all pH values of the
11 solution within a selected range of pH values.

1 24. The method of Claim 23 wherein the dosage form is selected from
2 the group consisting of a syrup, a thick syrup, and a paste.

1 25. The method of Claim 23 wherein the first material is selected from
2 the group consisting of ursodeoxycholic acid, chenodeoxycholic acid, cholic acid,
3 hyodeoxycholic acid, deoxycholic acid, 7-oxolithocholic acid, lithocholic acid,
4 iododeoxycholic acid, iocholic acid, tauroursodeoxycholic acid, taurochenodeoxycholic
5 acid, taurodeoxycholic acid, glyoursodeoxycholic acid, taurocholic acid, glycocholic
6 acid, their derivatives at a hydroxyl or carboxylic acid group on the steroid nucleus, their
7 salts, or their conjugates with amines.

1 26. The method of Claim 23 wherein the second material is selected
2 from the group consisting of maltodextrin, dextrin, corn syrup corn syrup solid, soluble
3 starch, and dextrans.

1 27. The method of Claim 23 wherein the the oral liquid dosage form
2 comprises one or more additional bile acids, aqueous soluble derivatives of bile acid, bile
3 acid salts, and amine-conjugated bile acids conjugated by an amide linkage.

1 28. A method for treating or preventing colorectal adenoma
2 comprising:

3 (a) administration of an oral liquid dosage form comprising:

4 (i) a first material selected from the group consisting of a bile
5 acid, an aqueous soluble derivative of a bile acid, a bile acid salt, a bile acid conjugated
6 with an amine by an amide linkage, and combinations thereof ;

7 (ii) a second material selected from the group consisting of an
8 aqueous soluble starch conversion product and an aqueous soluble non-starch
9 polysaccharide; and

10 (iii) water,

11 wherein the first and second materials both remain in solution for all pH values of the
12 solution within a selected range of pH values.

1 29. The method of Claim 28 wherein the dosage form is selected from
2 the group consisting of a syrup, a thick syrup, and a paste.

1 30. The method of Claim 28 wherein the first material is selected from
2 the group consisting of ursodeoxycholic acid, chenodeoxycholic acid, cholic acid,
3 hyodeoxycholic acid, deoxycholic acid, 7-oxolithocholic acid, lithocholic acid,

4 iododeoxycholic acid, iocholic acid, tauroursodeoxycholic acid, taurochenodeoxycholic
5 acid, taurodeoxycholic acid, glyoursodeoxycholic acid, taurocholic acid, glycocholic
6 acid, their derivatives at a hydroxyl or carboxylic acid group on the steroid nucleus, their
7 salts, or their conjugates with amines.

1 31. The method of Claim 28 wherein the second material is selected
2 from the group consisting of maltodextrin, dextrin, corn syrup corn syrup solid, soluble
3 starch, and dextrans.

1 32. The method of Claim 28 wherein the the oral liquid dosage form
2 comprises one or more additional bile acids, aqueous soluble derivatives of bile acid, bile
3 acid salts, and amine-conjugated bile acids conjugated by an amide linkage.

1 33. The method of Claim 28 wherein the the oral liquid dosage form
2 additionally comprises a least one emulsifying agent.

1 34. The method of Claim 33 wherein the emulsifying agent is selected
2 from the group consisting of guar gum, pectin, acacia, carrageenan, carboxymethyl
3 cellulose sodium, hydroxymethyl cellulose, hydroxypropyl cellulose, methyl cellulose,
4 polyvinyl alcohol, povidone, tragacanth gum, xanthan gum, and sorbitan ester.

1 35. The method of Claim 28 wherein the oral liquid dosage form
2 additionally comprises at least one pharmaceutical in a pharmaceutically effective
3 amount.

36. The method of Claim 35 wherein the pharmaceutical is selected from the group consisting of colchicine, sulfinpyrazone, allopurinol, piroxicam, tolmetin-sodium, idomethacin, ibuprofen, diflunisal, mefenamic acid, and mesalamine.

37. A method for treating hyperlipidemia comprising:

(a) administration of an oral liquid dosage form comprising:

(i) a first material selected from the group consisting of a bile acid, an aqueous soluble derivative of a bile acid, a bile acid salt, a bile acid conjugated with an amine by an amide linkage, and combinations thereof ;

(ii) a second material selected from the group consisting of an aqueous soluble starch conversion product and an aqueous soluble non-starch polysaccharide; and

(iii) water,

wherein the first and second materials both remain in solution for all pH values of the solution within a selected range of pH values.

38. The method of Claim 37 wherein the dosage form is selected from the group consisting of a syrup, a thick syrup, and a paste.

39. The method of Claim 37 wherein the first material is selected from the group consisting of ursodeoxycholic acid, chenodeoxycholic acid, cholic acid, hyodeoxycholic acid, deoxycholic acid, 7-oxolithocholic acid, lithocholic acid, iododeoxycholic acid, iocholic acid, tauroursodeoxycholic acid, taurochenodeoxycholic

5 acid, taurodeoxycholic acid, glyoursodeoxycholic acid, taurocholic acid, glycocholic
6 acid, their derivatives at a hydroxyl or carboxylic acid group on the steroid nucleus, their
7 salts, or their conjugates with amines.

1 40. The method of Claim 37 wherein the second material is selected
2 from the group consisting of maltodextrin, dextrin, corn syrup corn syrup solid, soluble
3 starch, and dextrans.

1 41. The method of Claim 37 wherein the the oral liquid dosage form
2 comprises one or more additional bile acids, aqueous soluble derivatives of bile acid, bile
3 acid salts, and amine-conjugated bile acids conjugated by an amide linkage.

1 42. The method of Claim 37 wherein the the oral liquid dosage form
2 additionally comprises a least one emulsifying agent.

1 43. The method of Claim 38 wherein the emulsifying agent is selected
2 from the group consisting of guar gum, pectin, acacia, carrageenan, carboxymethyl
3 cellulose sodium, hydroxymethyl cellulose, hydroxypropyl cellulose, methyl cellulose,
4 polyvinyl alcohol, povidone, tragacanth gum, xanthan gum, and sorbitan ester.

1 44. The method of Claim 37 wherein the oral liquid dosage form
2 additionally comprises at least one pharmaceutical in a pharmaceutically effective
3 amount.

1 45. The method of Claim 44 wherein the pharmaceutical is selected
2 from the group consisting of atorvastatin-calcium, cerivastatin sodium, fluvastatin
3 sodium, lovastatin, pravastatin sodium, and simvastatin.

1 46. The method of Claim 37 wherein the oral liquid dosage form
2 additionally comprises a dietary fiber.

1 47. The method of Claim 46 wherein the dietary fiber is selected from
2 the group consisting of psyllium, oat gum, soybean fiber, oat bran, corn bran, cellulose
3 and wheat bran.

1 48. A clear aqueous solution comprising:

2 (a) a first material selected from the group consisting of a bile
3 acid, an aqueous soluble derivative of a bile acid, a bile acid salt, and a bile acid
4 conjugated with an amine by an amide linkage;

5 (b) an aqueous soluble non-starch polysaccharide; and

6 (c) water,

7 wherein the first material and the polysaccharide both remain in solution for all pH values
8 of the solution within a selected range of pH values.

1 49. The aqueous solution of Claim 48 wherein the first material is
2 present in a pharmaceutically effective amount.

1 50. The aqueous solution of Claim 48 wherein the solution
2 additionally comprises a pharmaceutically effective amount of a pharmaceutical
3 compound and the pharmaceutical compound remains in solution for all pH values within
4 the selected range.

1 51. The aqueous solution of Claim 50 wherein the pharmaceutical
2 compound is selected from the group consisting of insulin, heparin, calcitonin, ampicillin,
3 amantadine·HCl, rimantadine·HCl, proinsulin, insoluble insulins, and amino acids.

1 52. The aqueous solution of Claim 50 wherein the pharmaceutical
2 compound is selected from the group consisting of octreotide, sildenafil citrate, calcitriol,
3 dihydrotachysterol, ampomorphine, yohimbin, trazodone, acyclovir, cidofovir,
4 delavirdine·mesylate, didanosine, famciclovir, forscarnet sodium, fluorouracil,
5 ganciclovir sodium, idoxuridine, interferon- α , lamivudine, nevirapine, penciclovir,
6 ribavirin, stavudine, trifluridine, valacyclovir·HCl, zalcitabine, zidovudine,
7 indinavir·H₂SO₄, ritonavir, nelfinavir·CH₃SO₃H, saquinavir·CH₃SO₃H, d-penicillamine,
8 chloroquine, hydroxychloroquine, aurothioglucose, gold sodium thiomalate, auranofin
9 levamisole, DTC, isoprinosine, methyl inosine monophosphate, muramyl dipeptide,
10 diazoxide, hydralazine·HCl, minoxidil, dipyridamole, isoxsuprine·HCl, niacin,
11 nylidrin·HCl, phentolamine, doxazosin·CH₃SO₃H, prazosin·HCl, terazocin·HCl,
12 clonidine·HCl, nifedipine, molsidomine, amiodarone, acetylsalicylic acid, verapamil,
13 diltiazem, nisoldipine, isradipine, bepridil, isosorbide dinitrate,
14 pentaerythrytol tetranitrate, nitroglycerin, cimetidine, famotidine, nizatidine, ranitidine,
15 lansoprazole, omeprazole, misoprostol, sucralfate, metoclopramide·HCl, erythromycin,

- 16 alprostadil, albuterol, pirbuterol, terbutaline·H₂SO₄, salmetrol, aminophylline, dyphylline,
- 17 ephedrine, ethylnorepinephrine, isoetharine, isoproterenol, metaproterenol, n·docromil,
- 18 oxy triphylline, theophylline, bitolterol, fenoterol, budesonide, flunisolide,
- 19 beclomethasone·dipropionate, fluticasone·propionate, codeine, codeine sulfate, codeine
- 20 phosphate, dextromethorphan·HBr, triamcinolone·acetonide, montelukast sodium,
- 21 zafirlukast, zileuton, cromolyn sodium, ipratropium bromide, nedocromil sodium
- 22 benzonate, diphenhydramine·HCl, hydrocodone·bitartrate, methadone·HCl,
- 23 morphine sulfate, acetylcysteine, guaifenesin, ammonium carbonate, ammonium chloride,
- 24 antimony potassium tartarate, glycerin, terpin·hydrate, colfosceril palmitate,
- 25 atorvastatin·calcium, cervastatin·sodium, fluvastatin·sodium, lovastatin,
- 26 pravastatin·sodium, simvastatin, picrorrhazia kurrva, andrographis paniculata, moringa
- 27 oleifera, albizzia lebeck, adhata vasica, curcuma longa, momordica charantia, gymnema
- 28 sylvestre, terminalia arjuna, azadirachta indica, tinosporia cordifolia, metronidazole,
- 29 amphotericin B, clotrimazole, fluconazole, haloprogin, ketoconazole, griseofulvin,
- 30 itraconazole, terbinafin·HCl, econazole·HNO₃, miconazole, nystatin,
- 31 oxiconazole·HNO₃, sulconazole·HNO₃, cetirizine·2HCl, dexamethasone, hydrocortisone,
- 32 prednisolone, cortisone, catechin and its derivatives, glycyrrhizin, glycyrrhizic acid,
- 33 betamethasone, ludrocortisone·acetate, flunisolide, fluticasone·propionate, methyl
- 34 prednisolone, somatostatin, lispro, glucagon, acarbose, chlorpropamide, glipizide,
- 35 glyburide, metformin·HCl, repaglinide, tolbutamide, colchicine, sulfinpyrazone,
- 36 allopurinol, piroxicam, tolmetin sodium, indomethacin, ibuprofen, diflunisal, mefenamic
- 37 acid, naproxen, and trientine.

1 53. The aqueous solution of Claim 50 wherein the first material is
2 ursodeoxycholic acid and the pharmaceutical compound is selected from the group
3 consisting of metformin HCl , ranitidine HCl, cimetidine, lamivudine, cetirizine 2HCl,
4 amantadine, rimantadine, sildenafil, apomorphine, yohimbine, trazodone, ribavirin,
5 dexamethasone, hydrocortisone, prednisolone, triamcinolone, cortisone, niacin, catechin
6 and its derivatives, taurine, vitamins, naturally occurring amino acids, and glycyrrhiza
7 extract.

1 54. The aqueous solution of Claim 48 wherein the selected pH range is
2 between approximately 1 and approximately 10 inclusive.

1 55. The aqueous solution of Claim 48 wherein the selected pH range is
2 the range spanned by the prevailing pH values found in the mouth, stomach, and
3 intestines of a mammal.

1 56. The aqueous solution of Claim 48 wherein the selected pH range is
2 the range spanned by the prevailing pH values found in the mouth, stomach, and
3 intestines of a human being.

1 57. The aqueous solution of Claim 48 wherein the selected pH range is
2 a range of pH values obtainable in an aqueous system encountered by the solution during
3 preparation, administration and until absorption in the body to which the solution is
4 administered.

1 58. The aqueous solution of Claim 48 wherein the selected pH range
2 spans all obtainable pH values in an aqueous system.

1 59. The aqueous solution of Claim 48 wherein the first material is
2 selected from the group consisting of ursodeoxycholic acid, chenodeoxycholic acid,
3 cholic acid, hyodeoxycholic acid, deoxycholic acid, 7-oxolithocholic acid, lithocholic
4 acid, iododeoxycholic acid, iocholic acid, tauroursodeoxycholic acid,
5 taurochenodeoxycholic acid, taurodeoxycholic acid, glyoursodeoxycholic acid,
6 taurocholic acid, glyocholic acid, their derivatives at a hydroxyl or carboxylic acid
7 group on the steroid nucleus, their salts, or their conjugates with amines.

1 60. The aqueous solution of Claim 48 wherein the bile acid salt is a
2 product of the reaction of a bile acid and an amine.

1 61. The aqueous solution of Claim 60 wherein the bile acid is selected
2 from the group consisting of ursodeoxycholic acid, chenodeoxycholic acid, cholic acid,
3 hyodeoxycholic acid, deoxycholic acid, 7-oxolithocholic acid, iododeoxycholic acid,
4 iocholic acid, tauroursodeoxycholic acid, taurochenodeoxycholic acid, taurodeoxycholic
5 acid, glyoursodeoxycholic acid, taurocholic acid, glyocholic acid, and their derivatives
6 at a hydroxyl or carboxylic acid group on the steroid nucleus.

1 62. The aqueous solution of Claim 60 wherein the amine is selected
2 from the group consisting of an aliphatic free amine, trientine, diethylene triamine,
3 tetraethylene pentamine, a basic amino acid, arginine, lysine, ornithine, ammonia, an

4 amino sugar, D-glucamine, N-alkylglucamines, a quaternary ammonium derivative,
5 choline, an heterocyclic amine, piperazine, N-alkylpiperazine, piperidine,
6 N-alkylpiperidine, morpholine, N-alkylmorpholine, pyrrolidine, triethanolamine, and
7 trimethanolamine.

1 63. The aqueous solution of Claim 48 wherein the bile acid salt is a
2 soluble metal salt of a bile acid, an inclusion compound between the bile acid and
3 cyclodextrin and its derivatives, or an aqueous soluble O-sulfonated bile acid.

1 64. The aqueous solution of Claim 50 wherein the first material is an
2 adjuvant.

1 65. The aqueous solution of Claim 50 wherein the first material is a
2 carrier of the pharmaceutical compound.

1 66. The aqueous solution of Claim 48 wherein the solution further
2 comprises a micelle forming material.

1 67. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a preparation for oral consumption.

1 68. The aqueous solution of Claim 48 wherein the solution is
2 comprised in an enema.

1 69. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a mouthwash.

1 70. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a gargle.

1 71. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a preparation for nasal administration.

1 72. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a preparation for otic administration.

1 73. The aqueous solution of Claim 48 wherein the solution is
2 comprised in an injection.

1 74. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a douche.

1 75. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a topical skin preparation.

1 76. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a cosmetic preparation.

1 77. The aqueous solution of Claim 48 wherein the solution is
2 comprised in a dosage form selected from the group consisting of a syrup, a thick syrup,
3 and a paste.

1 78. A method of preparing an aqueous solution wherein the solution
2 forms no detectable precipitate at any pH value of the solution within a selected range of
3 pH values comprising the steps of:

4 (a) dissolving a bile acid, bile acid salt, or bile acid-amine
5 conjugate in water to form a clear solution;

6 (b) adding at least one aqueous soluble non-starch
7 polysaccharide to the clear solution and allowing it to dissolve to form a clear solution;
8 and

9 (c) optionally adding a pharmaceutically effective amount of a
10 pharmaceutical compound.

1 79. The method of Claim 78 wherein the selected range is all pH
2 values obtainable in an aqueous system.

3 80. The method of Claim 78 wherein the selected range is between
4 approximately pH 1 and approximately pH 10.

1 81. A clear aqueous solution comprising:

2 (a) a first material selected from the group consisting of a bile
3 acid, an aqueous soluble derivative of a bile acid, a bile acid salt, and a bile acid
4 conjugated with an amine by an amide linkage;

5 (b) a polysaccharide having at least one reducing end and one
6 at least one non-reducing end; and

7 (c) water,

8 wherein the first material and the polysaccharide both remain in solution for all pH values
9 of the solution within a selected range of pH values.

10 82. A clear aqueous solution comprising:

11 (a) a first material selected from the group consisting of a bile
12 acid, an aqueous soluble derivative of a bile acid, a bile acid salt, and a bile acid
13 conjugated with an amine by an amide linkage;

14 (b) a second material selected from the group consisting of an
15 aqueous soluble starch conversion product and an aqueous soluble non-starch
16 polysaccharide; and

17 (c) a third material comprising an aqueous soluble bismuth
18 compound; and

19 (d) water,

20 wherein the first, second, and third materials all remain in solution for all pH values of
21 the solution within a selected range of pH values.

1 83. The aqueous solution of Claim 82 wherein the bile acid is selected
2 from the group consisting of ursodeoxycholic acid, chenodeoxycholic acid, cholic acid,

3 hyodeoxycholic acid, deoxycholic acid, 7-oxolithocholic acid, iododeoxycholic acid,
4 iocholic acid, tauroursodeoxycholic acid, taurochenodeoxycholic acid, taurodeoxycholic
5 acid, glyoursodeoxycholic acid, taurocholic acid, glycocholic acid, and their derivatives
6 at a hydroxyl or carboxylic acid group on the steroid nucleus.

1 84. The aqueous solution of Claim 82 wherein the pH range is selected
2 from about 2 to about 9.

1 85. The aqueous solution of Claim 82 wherein the bismuth compound
2 comprises an aqueous soluble reaction product between a bismuth ion and a chelator.

1 86. The aqueous solution of Claim 85 wherein the chelator is selected
2 from the group consisting of citric acid, tartaric acid, malic acid, lactic acid and eidetic
3 acid and alkalies.

1 87. The aqueous solution of Claim 85 wherein the bismuth compound
2 is selected from the group consisting of an ammonium salt of bismuth sulphate, an
3 ammonium salt of bismuth citrate, and bismuth sodium tartrate.

add
a₂

add
B₁₁